IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF GEORGIA
VALDOSTA DIVISION

JOSE HERNANDEZ and PRISCILLA HERNANDEZ, Plaintiffs, v. **CROWN EQUIPMENT CORP.,** Defendant.	Civil Action No. 7:13-CV-91 (HL)

ORDER

Before the Court is the Motion for Summary Judgment (Doc. 58) by Defendant Crown Equipment Corporation ("Crown") as well as a number of Daubert motions by the parties. The Court held a hearing on these motions on October 29, 2014. For the reasons given herein, the motion for summary judgment is granted in part and denied in part, and the Daubert motions are ruled on as stated below.

I. Factual Summary[1]

This is a product liability action. In early 2012, Plaintiff Jose Hernandez ("Mr. Hernandez") worked for Lowe's at a distribution warehouse in Valdosta,

[1] These facts are taken from Crown's Statement of Undisputed Facts (Doc. 59) and Plaintiff's Statement of Material Facts Creating a Genuine Issue for Trial (Doc. 80), as well as other evidence provided by the parties. All facts that Plaintiffs have properly disputed under Federal Rule of Civil Procedure 56 and Local Rule 56 have been viewed in their favor. See Celotex Corp. v. Catrett, 477 U.S. 317, 323–26, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986).

Georgia. On March 31, 2012, Mr. Hernandez was operating a stand-up rider forklift ("the forklift"), designed and manufactured by Crown, when he hit an aisle end-cap in the warehouse. During the accident, Mr. Hernandez's left foot became caught between the forklift and the aisle end-cap, causing such severe injuries that his left lower leg had to be amputated. (Crown's Statement of Undisputed Facts ("CSF"), Doc. 59, ¶¶1–2, 40; Deposition of Jose Hernandez, Doc. 65-2, pp. 133–34).

The forklift Mr. Hernandez was driving has a model number of RR 5225-45, a version of Crown's RR 5200 series. The forklift is entered from the rear and has a side-stance design. To operate the forklift the driver stands in the operator's compartment and faces to the side of the forklift, allowing the operator to swivel his head to the left or right depending on whether the forklift is traveling in a forks-trailing or leading direction. This means that an operator's left foot is positioned just inches from the rear edge of the operator's compartment. (CSF, ¶¶1, 28; Deposition of Ronald Grisez, Doc. 38-1, pp. 58–60; Figure 4 in Expert Report of Thomas Berry, Doc. 69-1, pp. 6, 8).

The forklift is not equipped with a door on the operator's compartment, and Crown does not install compartment doors as standard equipment on the stand-up rider forklifts it manufactures. Indeed, no forklift manufacturer in the world provides such doors as standard equipment on stand-up rider forklifts. However,

in the past Crown has placed doors on stand-up rider forklifts at the specific request of certain purchasers, and some manufacturers still do. (CSF, ¶¶7, 26; Berry Report, pp. 15–17).

There are no government regulations or industry safety standards that require forklift manufacturers to install doors on the operator's compartments of stand-up rider forklifts. The American National Standards Institute ("ANSI") is an agency that coordinates safety standards for many industries, and its B56.1 Subcommittee promulgates standards for stand-up rider forklifts. According to ANSI's B56.1 Safety Standard ("B56.1 Standard"), these forklifts "are designed with open operator compartments to permit easy ingress and egress." If a forklift operator realizes that the forklift is about to tip over or roll off of a dock, then the B56.1 Standard recommends, where possible, stepping off and away from the forklift "to reduce the risk of serious injury or death." On two different occasions, ANSI has rejected proposed revisions to the B56.1 Standard that would require the installation of compartment doors as standard equipment. In 1998, the Occupational Safety and Health Administration ("OSHA"), which regulates the workplace operation of forklifts and has adopted the B56.1 Standard, determined that tip-overs were the leading cause of fatal accidents on industrial forklifts. The National Institute for Occupational Safety and Health ("NIOSH") warns forklift drivers to step backwards off of the forklift in the event of a lateral tip-over, and

the United States military requires that its stand-up rider forklifts "permit unobstructed egress from the rear of the truck." (CSF, ¶¶10–14, 17–18, 21–24).

Because the forklift Mr. Hernandez drove was not equipped with a door for the driver's compartment, Crown took steps to warn users about the risk of injury to a body part that was outside of the driver's compartment. Both a warning label on the forklift and the operator's manual caution operators to keep their limbs inside the operator's compartment. According to the warning in the operator's manual, "A foot or hand caught between the truck and a fixed object will be crushed or even cut off." Mr. Hernandez was trained in how to operate the forklift, and he understood the danger of not keeping his feet inside the driver's compartment. (Id. at ¶¶28–33, 38, 42–43).

Mr. Hernandez and his wife (jointly "Plaintiffs") brought suit against Crown on May 24, 2013. Crown removed the case to this Court on July 1, 2013. Asserting both strict product liability and negligent design defect claims,[2] Plaintiffs allege that Crown defectively designed the forklift by failing to provide a driver's compartment door as standard equipment and neglecting to make other design changes. According to Plaintiffs, by selling the forklift with this design in knowing

[2] To the extent that the Complaint could be read to include a manufacturing defect claim (see Doc. 1-1, ¶16), summary judgment is granted on this claim. Plaintiffs have not opposed Crown's motion for summary judgment with regard to this claim. Summary judgment is also granted on the warnings defect claim. Plaintiffs have clarified that they "will not be pursuing a warnings claim at trial. [Mr. Hernandez] does not assert that defective warnings caused his injuries." (Plaintiff's Response to Defendant's Motion for Summary Judgment, Doc. 79, p. 15).

disregard to the threat that an operator's leg could be crushed in the manner that Mr. Hernandez's was, Crown is liable for punitive damages. Mr. Hernandez's wife seeks damages under a loss of consortium claim. (Notice of Removal, Doc. 1; Complaint, Doc. 1-1, ¶¶1, 14–31).

II. The Parties' Daubert Motions

The Court will address the Daubert motions before turning to Crown's motion for summary judgment because whether the parties' proposed experts will be allowed to testify relates to the summary judgment analysis. A party wishing to have a witness testify as an expert bears the burden of laying, by a preponderance of the evidence, a foundation for the admission of its expert's testimony. Corvey v. Baxter Healthcare Corp., 298 F.3d 1253, 1256 (11th Cir. 2002) (quoting Allison v. McGhan Med. Corp., 184 F.3d 1300, 1306 (11th Cir. 1999)). Whether certain opinions may be offered as expert testimony is determined by the standard stated in Federal Rule of Evidence 702:

> A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

As the Supreme Court clarified in Daubert v. Merrell Dow Pharmaceuticals, a trial court must act as a "gatekeeper" and test the reliability and relevancy of the proposed expert's opinions before determining whether they can be admitted as expert testimony. 509 U.S. 579, 589–93, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993). The trial judge must undertake a "rigorous three-part inquiry" and decide whether: (1) a proposed expert is qualified to competently testify concerning his opinions; (2) his methodology is sufficiently reliable; and (3) his testimony would assist the jury, through the application of scientific, specialized, or technical expertise, to determine a fact in issue or understand the evidence. United States v. Fazier, 387 F.3d 1244, 1260 (11th Cir. 2004) (quoting City of Tuscaloosa v. Harcros Chems., Inc., 158 F.3d 548, 562 (11th Cir. 1998)). The Supreme Court has provided a non-exclusive list of factors that may be considered in weighing the reliability of an expert's theory or methodology, including "(1) whether it can be (and has been) tested; (2) whether it has been subjected to peer review and publication; (3) what its known or potential rate of error is, and whether standards controlling its operation exist; and (4) whether it is generally accepted in the field."[3] United States v. Brown, 415 F.3d 1257, 1267–68 (11th Cir. 2005) (citing

[3] The Advisory Committee's Notes on Rule 702 provide additional factors, including (1) whether the expert is testifying based on research that was conducted independently of litigation, (2) whether she is "unjustifiably extrapolate[ing] from an accepted premise to an unfounded conclusion," (3) whether she has accounted for "obvious alternative explanations," (4) whether she is being as careful in reaching her opinions as a hired expert as she would for her professional work outside of litigation, and (5) whether her

Daubert, 509 U.S. at 593–94). The reliability test is flexible, and not all of the factors are applicable in every case. Id.

A. Plaintiffs' Daubert Motion on Ronald Grisez

The Court denies Plaintiffs' motion to exclude two opinions from Crown's proposed expert Ronald Grisez ("Grisez"). Plaintiffs contend that these opinions are based on a flawed methodology and are therefore unreliable. Plaintiffs object, first, to Grisez opining that "[i]n an off-dock or tip-over event, the door will slow the operator down and decrease his/her opportunity to clear the [forklift], exposing the operator to potentially severe or fatal injuries." They also object to his opinion that a "door does not keep the operator in the [forklift]."

Grisez's opinions are based on testing Crown's proposed expert witnesses and other researchers conducted using anthropomorphic test devices ("ATDs"), i.e., dummies, to measure the forces experienced by forklift operators in off-dock and tip-over accidents. The testing results were summarized in a study by the Biodynamic Research Corporation and SEA, Inc. ("the BRC/SEA Study") and a paper written by Dr. John Weichel and Dr. Michael Scott ("the Weichel/Scott Paper"). Both the study and the paper were based on a methodology that involved placing an ATD inside the driver's compartment of a forklift, attaching accelerometers and other devices to the ATD, and then tipping the forklift over or

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purported area of expertise "is known to reach reliable results for the type of opinion the expert would give." (2000 Amendments).

pushing it off of a dock. In the BRC/SEA Study, there was a door on the forklift's driver's compartment. By measuring the forces applied to the ATD and observing its physical motions while being tipped over or falling off of the dock, the researchers developed opinions about the potential injury rate for human drivers in off-dock or tip-over accidents and whether forklifts should be equipped with doors given the risk of injury in such events.

Plaintiffs raise two objections to this methodology. First, they deny that ATDs provide a valid simulation for how humans would respond in off-dock or tip-over accidents. They contend that humans would be able to withstand greater force than ATDs can and that humans have the ability to take protective action—using one's arms to cover one's head, for instance—that an ATD lacks. Second, Plaintiffs insist that the sample size for the studies cited in support of Grisez's opinions was not large enough to provide a reliable methodology.

While Plaintiffs certainly raise interesting points, their arguments do not convince the Court that the methodology behind the BRC/SEA Study and the Weichel/Scott Paper is not scientifically reliable. Significantly, Ruston Hunt, Plaintiff's own proposed expert, agreed with the statement that "ATD dummy testing [is] an accepted mechanism to evaluate the injury potential in different accident scenarios." (Deposition of Ruston Hunt, Doc. 45-7, p. 53). The Weichel/Scott Paper has also been subjected to peer review. Using an ATD to

project how a human operator would react in an off-dock or tip-over accident is an imperfect methodology,[4] but these limitations can be, and undoubtedly will be, explored through cross examination of Grisez. The methodology upon which Grisez bases his opinions meets Daubert's reliability standard. Insofar as the sample size for ATD testing in forklift accidents might be small, the Court believes this issue is also one that is more properly offered to the jury for its consideration, for this criticism relates to the credibility of Grisez's opinions, not their admissibility. See Marvin Lumber & Cedar Co. v. PPG Indus., Inc., 401 F.3d 901, 916 (8th Cir. 2005); see also Jellibeans, Inc. v. Skating Clubs of Ga., Inc., 716 F.2d 833, 844–45 (11th Cir. 1983) (noting that "technical deficiencies" in sampling "affect the … weight … and not its admissibility").

B. Plaintiffs' Daubert Motion on Charles Watkins

The Court denies Plaintiffs' Daubert motion with regard to Crown's proposed expert Charles Watkins ("Watkins"). Plaintiffs move to exclude a number of Watkins' opinions on the grounds that his methodology is not scientifically reliable and because he is not qualified to offer his first opinion. The first opinion is that the "inertial 'forces' acting on the operator during braking or turning are not sufficient in magnitude or concentrated at a location that would

[4] For instance, having an actual human driving the forklift during such a test might provide more accurate results, but Plaintiffs' own experts agree this scenario would expose the operator to a risk of injury or death. (See Hunt Depo., p. 53; Deposition of Kelly Kennett, Doc. 65-3, pp. 123–24).

cause an operator's leg to leave the operator's compartment." The Court finds that this opinion is based on reliable, scientific principles. Watkins' training and experience as a mechanical engineer, combined with his testing of forklifts, make him qualified to offer this opinion and render it reliable.[5]

Plaintiffs also seek to exclude Watkins' opinion that tip-over and off-dock accidents expose forklift drivers to a "risk of serious injury or death. [Studies] demonstrate that in [such] accident[s], a door will not protect the operator." Watkins bases this opinion, in part,[6] on studies that he and other researchers conducted using computer models to indicate how ATDs would behave in an off-dock or tip-over accident. The results of one of their studies were published in a peer-reviewed journal.[7] Plaintiffs object to this methodology for the same reasons they objected to the research underlying Grisez's opinions. Thus, for the same reasons provided above with regard to the Daubert motion on Grisez, the Court finds the methodology behind Watkins' opinion to be reliable.

The Court is also persuaded that reliable scientific methods support Watkins' conclusions that "the accident was caused by Mr. Hernandez's failure to follow safety instructions" and that "a volitional act" is the "only plausible

[5] Plaintiffs cite no authority for why the Court should disregard Watkins' affidavit offered to elaborate on the information he provided in his report and deposition. In any event, the opinion would be admissible even without the affidavit.

[6] He also relies on the BRC/SEA Study.

[7] See M. Zoghi-Moghadam, *et al.*, Biodynamics Model for Operator Head Injury in Stand-Up Lift Trucks, 11 Computer Methods in Biomechanics and Biomedical Engineering 397–405 (2008).

engineering explanation" for why Mr. Hernandez's foot was outside of the operator's compartment of the forklift. The opinions are not speculation but are derived from evidence about how the forklift was operating prior to the accident, accident records, the area in the Lowe's warehouse where the accident occurred, and Watkins' knowledge of physics and engineering principles. The Court is not aware of any authority requiring a mechanical engineer such as Watkins to perform a reconstruction of an accident before opining on how it occurred.

Finally, Plaintiffs move to exclude Watkins' opinion that "[i]n many cases, an operator can get off the [forklift] when it becomes obvious that [an accident] is impending and has a better chance of safe escape than after it begins." Plaintiffs' arguments are unpersuasive. Watkins' statement is based on research which the Court has already found involved scientifically-reliable methods.

C. Plaintiffs' Daubert Motion on Dan Dunlap

The Court grants in part and denies in part Plaintiffs' motion to exclude the proposed testimony of Crown's expert Dan Dunlap ("Dunlap"). Plaintiffs argue for the exclusion of three of Dunlap's opinions. First, they contend that Dunlap has not utilized a reliable methodology in reaching his conclusion that during "an off-dock event the operator is not retained in the [forklift] or protected by the door…. [T]esting shows that the momentum pushes the operator away from the entry and towards the overhead guard." This opinion is based on the studies Dunlap

conducted with Watkins and other researchers, the BRC/SEA Study, and the Weichel/Scott Paper, which used ATDs in their tests. Plaintiffs reiterate their complaint that ATDs cannot perfectly simulate how humans would behave in forklift accidents. While appreciating the point, the Court is not convinced that this limitation renders the testing unreliable.

Next, Plaintiffs move to exclude Dunlap's assertion that "Mr. Hernandez was not observant, was operating too fast for conditions and failed to control the [forklift]." Plaintiffs challenge this opinion on the grounds that Dunlap did not do any research himself to reach this conclusion but is merely parroting the opinions of other scientists. The problem with this argument is that Plaintiffs do not identify which scientists originally provided this opinion that Dunlap has, supposedly, now repackaged. The record shows that Dunlap has extensive experience designing, testing, and working with Crown forklifts. After reviewing the evidence relating to Mr. Hernandez's accident, Dunlap could properly apply his knowledge and experience to develop an opinion on how the accident occurred. The motion to exclude this opinion is denied.

Plaintiffs lastly object to Dunlap's conclusion that a "[r]eview of accidents indicate[s] that far more operators choose to get off and away from the [forklifts] in these catastrophic events," referring to tip-over and off-dock incidents. Plaintiffs contend that, without disclosing a sample size or rate of error, Dunlap is

extrapolating from a limited number of recorded accidents to what occurs in such accidents generally. So long as Dunlap only testifies about what occurred in recorded accidents and refrains from testifying about how operators behaved in the general, potentially larger body of forklift accidents that went unreported, his testimony may be admitted.[8]

D. Plaintiffs' Daubert Motion on Laurentius Marais

Plaintiffs next move to exclude the opinions of Crown's data analysis expert, Laurentius Marais ("Marais"). This motion is granted in part and denied in part. Marais is a specialist in mathematical and statistical analysis. Broadly stated, his trial testimony would (1) compare accident rates for operators of Crown forklifts to those experienced by people engaged in other occupations and activities; (2) observe that the rate of serious left leg injuries for operators of Crown forklifts like the one in this case has decreased significantly since 2001; (3) note that the incidence of collision accidents in such forklifts has decreased since OSHA introduced new training requirements; and (4) show that there is a very low rate of injury for operators of open-compartment Crown forklifts even when compared to the Crown forklifts with doors. Among other things, Marais bases his opinions on reports obtained from a database Crown maintains on recorded accidents involving its forklifts. Plaintiffs did not depose Marais.

[8] Plaintiffs' objections about the data gleaned from Crown's accident reports are addressed in the analysis of the Daubert motion on Laurentius Marais.

Plaintiffs argue that eight of Marais' opinions should be excluded because his methodology is unreliable.[9] The Court disagrees. Plaintiffs' primary criticism of Marais' methodology concerns his use of accident data supplied by Crown. The manufacturer encourages its branches and dealers to report accidents involving injuries to operators of its forklifts, and it keeps a database of accident reports based on the information it receives. Plaintiffs point out a number of steps[10] that Crown could have taken, but did not, that possibly would have increased the accuracy of its accident records. This argument's great flaw is that it rests entirely on speculation. Undoubtedly there are numerous ways in which Crown might have sought information, but that does not mean it would have obtained additional information about accidents involving its forklifts or that the information would have been more reliable than the data it already had. Crown has presented evidence that its accident data is "very reliable," (Deposition of Rob Brewer, Doc. 65-1, pp. 32–34), and that it would "likely" hear of accidents causing injuries to operators of its forklifts. (Grisez Depo., p. 86). The approach seems to be a reasonably reliable method of learning about accidents, notwithstanding Plaintiffs' speculations.

[9] These are opinions two and four through ten.

[10] For instance, Crown has not compared its accident numbers to data kept by OSHA or the NIOSH, obtained injury reports from third-party servicers of its products, or broadly advertised within the forklift industry requesting information about such accidents.

Plaintiffs also seek to exclude Marais' opinions comparing the rate of injury in operating Crown forklifts to other activities and occupations.[11] They contend these opinions should be excluded as irrelevant and because Marais is not qualified to testify concerning the other activities and occupations. The Court does not agree. Plaintiffs intend to introduce testimony from their expert witness, Thomas Berry, that there have been "a very large number of serious, disabling injuries" similar to Mr. Hernandez's experienced by operators of Crown forklifts. Berry would also testify that the possibility of having one's foot or leg crushed between a forklift and a stationary object is "a very serious hazard associated with [operating] stand-up forklifts." (Berry Report, p. 14). Marais' reference to the risk of injury in other occupations and activities thus becomes relevant by providing a comparative context for Berry's assertions. As for Marais' qualifications to use data relating to the other occupations and activities, the Court notes that he is using information compiled by the United States Department of Transportation and the Bureau of Labor Statistics in the United States Department of Labor. Federal Rule of Evidence 703 allows experts to base their opinions on certain facts or data "[i]f experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the

[11] These are opinions one through four.

subject…." Relying on data from the sources Marais has chosen is a reliable method because statistical analysts regularly employ such sources.[12]

The Court is not persuaded by Plaintiffs' arguments for excluding Marais' fifth opinion. Marais would testify that the "rate of lower left leg injuries in Crown Stand-Up Rider forklifts decreased significantly in 2001 … [and has since] remained statistically significantly below the rate before 2001." The Court has already considered and rejected Plaintiffs' first argument for exclusion, that the data supporting this opinion is unreliable. Plaintiffs also contend that the opinion should not be admitted because it is misleading as to the cause of the decrease in lower left leg injuries. The Court disagrees. Marais is not opining about causation but merely observing that the rate of lower left leg injury decreased after 2001.[13] Were a jury to find this opinion credible, it would be relevant as evidence that Crown was not guilty of conduct that would warrant an award of punitive damages, which Plaintiffs seek.

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[12] See, e.g., Murphy v. Ford Motor Co., Civ. Action No. 07-864, 2009 WL 2998960, at *9 (W.D. La. Sept. 14, 2009) (Department of Transportation's National Highway Transportation Safety Administration); Carlisle v. Hitcachi Koki U.S.A. Ltd., No. 05-0995-CV-W-ODS, 2007 WL 1100454, at *2 (W.D. Mo. April 10, 2007) (Bureau of Labor Statistics); Maxwell v. Ford Motor Co., 160 F. App'x 420, 424 (5th Cir. 2005) (affirming trial court's decision to allow an expert to rely "on statistics from the federal government").

[13] Plaintiffs anticipate that Crown will use this opinion at trial to suggest that the lack of doors on its forklifts was not causing lower left leg injuries. Perhaps Crown will, but Plaintiffs may raise objections then if they wish to do so. The point is that Marais' opinion does not comment on causation, so excluding his opinion based on speculation about what might occur at trial would be improper.

Plaintiffs also contend that Marais must not be allowed to testify at trial concerning his eighth and tenth opinions because with them he makes statistical inferences about causation without providing a rate of error. In his eighth opinion, Marais concludes that "[i]n recorded real-world off-dock and tip-over accidents, Crown … forklift operators have more often chosen to jump from the forklift than stay with it … [and the] rate of serious or fatal injuries among operators who jumped has been substantially lower than the rate among operators who stayed with the forklift." Among other things, the tenth opinion states that for "Crown … forklifts, rates of collision accidents decreased after the effective date of the OSHA training requirements." Courts certainly disfavor expert testimony based on a methodology that extrapolates from a sample size of data to reach meaningful conclusions about some larger body of information without disclosing the known or potential rate of error involved. See e.g., Kilpatrick v. Breg, Inc., 613 F.3d 1329, 1337–38 (11th Cir. 2010); United States v. Giambro, 544 F.3d 26, 32–33 (1st Cir. 2008). On the other hand, a "statistical analysis is reliable if it is a product of simple arithmetic and algebra." S. States Coop., Inc. v. Melick Aquafeeds, Inc., 701 F. Supp. 2d 1348, 1361 (M.D. Ga. 2010) (citing Harcros, 158 F.2d at 566). Marais may offer his eighth and tenth opinions at trial so long as he restricts his causation testimony to his analysis of Crown's accident

reports, without commenting on accidents involving Crown forklifts in general, data for which he has not offered a known or potential rate of error.

In sum, Plaintiffs' Daubert motion on Marais is denied except to the extent that, with his eighth and tenth opinions, he would testify about causation for accidents involving Crown forklifts in general, beyond the information he learned from Crown's accident reports. Most of Plaintiffs' criticisms of Marais' opinions relate to the accuracy of the information he used in his methodology, not whether the methodology itself was reliable. This type of objection is more properly raised through cross examination or rebuttal testimony than with a Daubert motion. See Quiet Tech. DC-8, Inc. v. Hurel-Dubois UK Ltd., 326 F.3d 1333, 1345 (11th Cir. 2003); Ramirez v. E.I. DuPont de Nemours & Co., 579 F. App'x 878, 882–83 (11th Cir. 2014).

E. Plaintiffs' Daubert Motion on Thomas McNish

Plaintiffs seek to exclude one of the opinions of Crown's biomechanics expert, Thomas McNish ("McNish"). Their motion is denied. Plaintiffs offer three reasons for opposing admission of McNish's sixth opinion. This opinion asserts that "[e]xtensive testing" shows the risk of injury in tip-over and off-dock forklift accidents and "the critical need to escape when such an event becomes inevitable," that "these studies also show" that doors on the operator compartments delay operators who are needing to escape, and that the tests

reveal that an operator would have been in far greater danger of a fatal injury in such an accident if there were a door on the operator compartment than if there were not. According to McNish, the "science of work place safety cannot support exposing workers to such hazards, only in an effort to decrease the risk of non-fatal limb injuries."

First, Plaintiffs maintain that McNish is not qualified to give design or operation opinions such as this one. Crown responds that McNish is not being offered as an expert on the design or operation of forklifts, but rather the injury potential facing forklift operators in various scenarios. Having reviewed the evidence in the record,[14] the Court is convinced that McNish is qualified by his education, training, and experience to provide the opinion in question.

Next, Plaintiffs argue that the opinion should be excluded because the testing on which he relies is unreliable. The specific research with which Plaintiffs take issue was taken from the BRC/SEA Study and Watkins' work. The Court has already addressed Plaintiffs' concerns about these studies and, as previously indicated, is not convinced the methodology they used is unreliable.

Finally, Plaintiffs maintain that McNish does not offer support for his conclusion that doors would increase the risk of a fatal injury for forklift operators involved in off-dock or tip-over accidents and that the goal of decreasing non-

[14] As with Marais, Plaintiffs chose not to depose McNish.

fatal limb injuries would not justify exposing workers to such a risk. In addition to objections which have already been addressed, Plaintiffs charge that McNish did not, but should have, compared the likelihood an operator of a Crown forklift would have a collision like Mr. Hernandez's to the possibility the forklift would tip over or fall off of a dock. Plaintiffs' argument misses McNish's point. He is only saying that the "science of work place safety" does not support increasing the risk of a fatal injury in pursuit of decreasing non-fatal injuries, not that a forklift operator is more likely to collide with a stationary object than tip over or roll off of a dock. McNish may offer this testimony at trial.

F. Crown's Daubert Motion on Thomas Berry

The Court now turns to Crown's Daubert motions. The Court will address first the motions relating to Plaintiffs' proposed design experts. Crown moves to exclude all of the opinions of Thomas Berry ("Berry"). This motion is granted in part and denied in part. Berry has provided seventeen opinions[15] about which he would testify at trial, but the opinions cover four general topics. First, Berry concludes that the Crown forklift in this case was defectively designed, and he critiques the reasons Crown has offered for selecting the design. Second, Berry asserts that the defective design of the forklift is what caused Mr. Hernandez's injuries. Third, Plaintiffs' expert proposes to testify that, during tip-over or off-dock

[15] The seventeenth opinion has four subparts.

accidents, forklift operators would be safer staying inside the operator's compartment than in exiting the forklift. Finally, Berry opines that a safer design for the Crown forklift at issue would be to place a door on the driver's compartment, with a latched door being ideal.

Contrary to Crown's contentions, Berry is qualified to offer the opinions he has reached. He has both a bachelor's and a master's degree in mechanical engineering. He also has "significant experience in forklift design and forklift accidents of the type at issue in this case." Congilaro v. Crown Equip. Co., No. 5:09-cv-1452, 2012 WL 3821952, at *3 (N.D.N.Y. Sept. 4, 2012) (involving a plaintiff who suffered a lower left leg injury while operating a Crown stand-up forklift). Berry has conducted over two hundred investigations dealing with injuries to drivers of stand-up forklifts, and has reviewed thousands of accident reports from various forklift manufacturers, OSHA, and state agencies. His analysis and research in the area of forklift accidents were the subject of a peer-reviewed paper he presented to the American Society of Mechanical Engineers ("ASME") in 2011. The Court concludes that, under Federal Rule of Evidence 702, Berry is qualified to testify concerning the opinions he offers in this case.

In addition to disputing Berry's qualifications, Crown contends that his methodology is unreliable because he used four sets of data that are suspect. Crown first targets two simulations Berry performed in an attempt to replicate a

tip-over accident and show that it would be safer for a forklift operator to remain in the forklift during such an event. In 1997, with the first simulation, Berry used a stand-up forklift manufactured by Yale Corporation to determine whether an operator could retain his grip inside the operator's compartment while the forklift was being tipped over. A backhoe was used to push the forklift over, with the forklift being gradually tilted over as the backhoe's bucket was raised until the forklift reached a tipping point. Although Berry did calculate the speed of the forklift at the moment of impact with the ground, the study otherwise produced little useful data because it was too unrealistic. Berry has admitted that most tip-over accidents occur in a split second, unlike the gradual tilting over of the forklift in the 1997 study. Furthermore, the operator in the demonstration knew the tip-over was imminent, whereas many tip-over and off-dock accidents are emergency situations. Berry may not testify at trial concerning his 1997 study.

Berry also performed a tip-over simulation in 2008. He fashioned a steel cage using four poles connected together and stood in the middle of the poles gripping handrails as the cage was tilted over. A rope was used to pull on the cage until the force of gravity propelled the cage down to a resting point. The cage did not go all the way to the ground, but only to an inclined point so that its rotational speed of impact would be the same as in the BRC/SEA Study. From this cage study, Berry calculated the force necessary to retain his grip on the

handholds and the impact of the cage on the incline. As with the 1997 study, the Court finds the demonstration in 2008 to be insufficiently similar to real-life events to serve as useful, relevant evidence for the jury. Had Berry's test involved a Crown stand-up rider forklift that did not have handholds added and was tipped over in a more realistic manner, the Court would have been much more likely to allow him to present his findings to a jury. As things stand, he may not.

Crown also moves to prevent Berry from being allowed to testify concerning a crush simulation he performed. Crown contends that testimony relating to this demonstration would not be helpful to the jury, and the Court agrees. In the simulation, Berry taped a pipe inside a shoe and then crushed the shoe against a slender steel beam using a Crown RC forklift. The crushing does not fit the facts of this case. There is no indication that the pipe was the same density as a human leg or that Berry drove the forklift in the simulation at the same speed as Mr. Hernandez was driving in his accident. At trial, Berry may not testify concerning the crush simulation.

Additionally, Crown seeks to exclude testimony concerning time studies Berry conducted using a forklift manufactured by Raymond Corporation. Berry installed handholds and a spring-loaded door on a Raymond forklift and then timed how long it took an operator to grab onto the handholds, exit the forklift with the door closed, or exit with the door open. The door had also been

manufactured by Raymond. The Court is concerned by the fact that these studies involved a Raymond forklift while this case is about one made by Crown. Nevertheless, judging by the evidence presented, especially comparing pictures of the forklifts in question, the Court doubts whether there is much, if anything, about the Raymond forklift that would significantly change the time results in comparison to a Crown machine. Differences between the forklifts can be pointed out through cross examination, and, if needed, appropriate jury instructions can orient the jury. Berry may testify about his time studies.

The final set of data that Crown moves to exclude comes from Berry's review of Crown's accident reports. Using what he describes as a "generally accepted statistical analysis methodology," Berry examined the reports in Crown's accident database, separated the accidents into the categories of collision, tip-over, or off-dock event, and looked to see if any trends appeared. Berry concluded from this review that there is a "very serious hazard" that operators of Crown forklifts could have their "feet or legs … crushed between the rear of the forklift and a stationary object" and that this hazard "is responsible for a very large number of serious, disabling injuries." According to Crown, Berry must not be allowed to offer this as an expert opinion because he did not use any methodology, did not employ any expert skill to reach it, and did not provide any rate of error or standard deviation for his analysis.

The Court is unconvinced by Crown's objections. First, at its core Berry's methodology appears to be exactly the same as that used by Crown's statistical analysis expert, Laurentias Marais, which the Court has already found to be sufficiently reliable. Second, Berry clearly used his expert knowledge and skill in reaching this opinion. As a mechanical engineer, Berry was able to categorize the accident reports with more accuracy than a layperson could. He likewise utilized his knowledge of the forklift industry to consider accident data from other sources, such as other manufacturers and OSHA. Finally, with regard to Crown's concerns that Berry has not provided a rate of error or standard deviation for his work, the Court will impose the same limitation placed on Marais' eighth and tenth opinions. Berry may describe trends he has observed in the accident reports he has reviewed. He may not extrapolate from this review and make inferences about causation that would be applicable to all accidents involving Crown stand-up forklifts because, at least theoretically, not all such accidents have been accounted for in Crown's accident database. In testifying at trial, Berry must be clear that his opinions are based on the accidents whose reports he has actually reviewed.

Having eliminated some of the data Berry relies on, the question now becomes which of his seventeen opinions may be heard by a jury. As Plaintiffs have noted, Crown's Daubert motion does not address a number of additional

sources for the data underpinning Berry's opinions, including extensive research he and others have done into stand-up rider forklift accidents and the injury rates for various types of forklift accidents, testing he performed on the ability of a door to withstand object penetration into a forklift's operating compartment, his use of the safety design hierarchy, the wording of ANSI's standards, and OSHA's regulations and rules. Adding the information gleaned from these sources to the data that is being admitted over Crown's Daubert motion, the Court finds that all of Berry's opinions meet the requirements of Rule 702 and may be admitted at trial. See Wright v. Case Corp., No. Civ. A 1:03-cv-1618 (JEC), 2006 WL 278384, at *4 (N.D. Ga. Feb. 1, 2006) (finding a design expert's methodology to be unreliable because, among other things, the expert was "not aware if his designs or similar ones are incorporated in other manufacturers' [products]"); McGee v. Evenflo Co., No. 5:02-cv-259-4 (CAR), 2003 WL 23350439, at *9–11 (M.D. Ga. Dec. 11, 2003) (noting, in a defect design case, that a design expert's methodology might be reliable if based on testing of the allegedly defective product or an accident history analysis). However, as stated above, Berry may not utilize certain sources of data when testifying.

G. Crown's Daubert Motion on Mark Elrod

Crown's Daubert motion on Mark Elrod ("Elrod") is granted. Plaintiffs seek to have Elrod testify as a design expert. First, Elrod would share with the jury his

opinion that "[b]oth tip over and off dock events are relatively rare," so during such accidents forklift operators should stay inside the operator's compartment "in most circumstances." Second, the "warnings and instructions provided" for the Crown forklift in this case "do not adequately advise the operator what to do in the event of a tip over or off dock event." Third, as designed, Crown's forklift is defective "because it fails to protect operators from the risk of injury created by known foreseeable hazards including collisions, tip-overs, and off dock events." Elrod believes that Crown should have equipped its forklift with a door like the one he designed. Crown moves to exclude these opinions on the grounds that Elrod is unqualified to provide them and that they are not supported by a reliable methodology.

Elrod is not qualified to opine on the effectiveness of the warnings and instructions Crown gave for the forklift. In his deposition, Elrod readily admitted that he is not a warnings expert and that he would not hold himself out as having expert knowledge on "hazard communication." There is no evidence that he has ever developed or designed warnings or instructions for how forklift operators should respond to emergency situations while operating a forklift. Moreover, given Elrod's limited experience with stand-up rider forklifts, there is no other basis on which he could be qualified to render warnings opinions under Rule 702.

Additionally, Crown argues that Elrod is unqualified to opine on the design of its forklift and how operators should behave during tip-over and off-dock accidents, but the Court disagrees. Elrod's undergraduate degree is in mechanical engineering, and he is an ASME member. He is a licensed forklift operator and has operated a Crown stand-up rider forklift for approximately forty hours. Given Elrod's extensive product design history, even if not specifically with stand-up rider forklifts, he would be qualified to testify about his first and third opinions had he engaged in a reliable methodology that would support them.

The problem is that Elrod's methodology falls woefully short of the reliability standard set by Rule 702. Unlike Berry, Elrod has little knowledge of forklift accidents, and, apart from reviewing some OSHA reports, he did not study accident records to determine how such accidents occur, the dangers they present, or operator behavior during these events. He did not familiarize himself with the relevant standards and regulations issued by ANSI and OSHA. He has not read or considered the testing done by experts whose opinions conflict with his own conclusions. Elrod did not engage in the rigorous work necessary to support his opinions, so they may not be presented to the jury for consideration.

Even if Plaintiffs wished to use Elrod as an expert solely to testify about the door prototype he designed, he would still be excluded. He designed a door for the Crown forklift that, resting on gravity hinges, would close through its own

weight and latches magnetically.[16] Elrod admits that, as a pinch point, the door presents some additional hazard to an operator, but nonetheless asserts that his design is a safer alternative to how Crown currently designs its stand-up rider forklifts. Elrod has no evidence to support this assertion. He did not test his door to see how long it would take an operator to exit the forklift, how well the door could withstand some object intruding into the operator's compartment, or how the door would perform in tip-over or off-dock events.[17] Crown's Daubert motion on Elrod is granted.

H. Crown's Daubert Motion on Russ Rasnic

The Court grants in part and denies in part Crown's motion to exclude testimony from Russ Rasnic ("Rasnic"), whom Plaintiffs offer to provide opinions on the forklift's design.[18] First, Rasnic opines that "manufacturers and designers of machinery must follow the established [safety] design priorities," which Crown did not do with its design of the forklift in this case because the design did not protect operators from the hazard of losing their balance as the forklift

[16] Elrod's door could be made out of either solid steel or plastic with a steel frame.
[17] Plaintiffs maintain that such testing is unnecessary because there are currently stand-up rider forklifts in the marketplace that have doors. The problem with this argument is that there is no evidence that Elrod's specific design is being used.
[18] Crown has requested that the Court disregard certain paragraphs of the affidavit Rasnic provided in opposition to the Daubert motion. To the extent that the affidavit conflicts with the Local Rules, it has not been considered.

decelerated.[19] Second, Rasnic concludes that a loss of steering and control of the forklift "started the accident sequence that led to Mr. Hernandez's injuries" and that this loss of steering was the result of "an operational defect that could have been prevented by … switching brake and power enabling pedal locations." Finally, Rasnic would testify that "the loss of balance that caused Mr. Hernandez to be partially ejected from the truck was a foreseeable hazard and should have been addressed by Crown…" in designing the forklift. According to Rasnic, a number of design changes would have made the forklift safer, including placing the deadman or brake pedal under the operator's right foot, installing the sensor pad under the left foot and making it larger and more sensitive, having a backrest that provided more resistance to sliding through the opening in the operator's compartment, and furnishing stationary handholds in the compartment. Crown argues that these opinions should be excluded because Rasnic is unqualified to give them and they are based on an unreliable methodology.

Rasnic is qualified to offer his opinions. He is a professional engineer and has both undergraduate and graduate degrees in mechanical engineering. He is a member of the ASME as well as other professional organizations. Furthermore, Rasnic has designed parts for many different types of machinery, including forklifts, although not stand-up rider forklifts specifically. However, he has

[19] In his report, Rasnic lists four opinions, but the fourth opinion seems redundant of the first one. The Court is treating the opinions as one.

operated stand-up rider forklifts produced by various manufacturers, including ones made by Crown. Rasnic has also investigated numerous accidents involving industrial machinery, even serving as a design expert in a previous case that involved a Crown stand-up rider forklift.

Crown's motion to exclude Rasnic's causation opinions is granted in part. Rasnic did not engage in a reliable, professionally rigorous methodology in reaching his opinion that a loss of steering and control triggered Mr. Hernandez's accident. This conclusion is only based on Mr. Hernandez's account for what occurred. Rasnic did not perform an accident reconstruction or even examine the post-accident reports made by Lowe's and Lift Power, Inc. following their examination of the forklift, both of which concluded there was nothing mechanically wrong with the forklift. Rasnic may testify that a loss of balance caused Mr. Hernandez's left leg to leave the operator's compartment of the forklift. In addition to reading Mr. Hernandez's description of what happened during the accident, Rasnic operated the forklift himself and could use his knowledge of physics and mathematics to reach a conclusion on the forces working on an operator's body when the forklift decelerated.

Although Rasnic may not opine on whether a loss of steering and control initiated the sequence of events in the accident, if presented with a hypothetical question that assumes Mr. Hernandez's version of events is correct, Rasnic may

provide most of his opinions for how the design of the forklift contributed to the accident. See United States v. Henderson, 409 F.3d 1293, 1300 (11th Cir. 2005). To that end, he may testify that a better design for the forklift would have placed the brake pedal under the operator's right foot, included a backrest that resisted an operator's tendency to lose his balance and step outside the operator's compartment during deceleration, and installed stationary handholds in the compartment. Other forklift manufacturers have included these features in their forklifts, Rasnic has operated these machines, and he has compared them to the Crown forklift, which he has also driven. Thus, a proper methodology undergirds his design recommendations. See Wright, 2006 WL 278384, at *4; McGee, 2003 WL 23350439, at *9–11.

However, Rasnic may not testify that the forklift's design is defective because it did not have a larger, more sensitive power sensor pedal. There is no reliable foundation for this opinion. Rasnic speculates that, as Mr. Hernandez began slowing the forklift just before the collision, his right foot came off of the power pedal and that this immediately cut the forklift's power steering, preventing him from avoiding the collision. The problem is that during Rasnic's inspection of the forklift he never tested to see if lifting one's foot from the sensor pad caused an immediate loss of steering. Reviewing records from other accidents that involved some form of steering loss and reading the owner's manual's general

description for the mechanical system for the forklift's power steering, as Rasnic did, is an inadequate foundation for his opinion. There is no indication that the other accidents involved similar sequences of events to what Mr. Hernandez experienced. As for the owner's manual, there is no evidence it describes an immediate loss of steering if the power sensor pad is disengaged.

I. Crown's Daubert Motion on Ruston Hunt

Crown also moves to exclude any testimony from Ruston Hunt ("Hunt"). This motion is granted in part and denied in part. Plaintiffs hired Hunt to provide "independent analysis of warning issues regarding" the Crown forklift and generate opinions based on that analysis. (Expert Report of Ruston Hunt, Doc. 74-1, p. 1). Provided as responses to questions presented by counsel for Plaintiffs, Hunt's opinions are that: (1) "[w]arnings are almost always a less reliable means of controlling hazards than doing so through the use of a physical guard," such as a door; (2) having a door on the forklift would obviate the need for a warning because the "door would explicitly communicate to operators" to stay inside the forklift while it is moving; (3) doors are necessary to protect against the dangers presented by collisions; (4) operators of machinery take more time responding to unexpected events, like tip-over or off-dock accidents, than to ones they encounter frequently, such as reacting to a pedestrian stepping in front of the forklift; and (5) if Crown does not install doors on its forklifts, it

should provide operator training in addition to warnings, but Hunt cannot imagine a training program that would adequately prepare operators for how to behave in tip-over or off-dock accidents. (Id. at 16–18). According to Crown, Hunt's opinions must be excluded because he is not qualified to render them, they were not formed from a reliable methodology, and they are not relevant in this case.

Hunt is qualified to testify about some of these opinions at trial as a human factors and warnings expert.[20] He has a bachelor's and master's degree in industrial engineering and a Ph.D. in mechanical engineering. At both the undergraduate and graduate level, he has taught courses dealing with human factors, engineering design and analysis, and human interaction with machinery. Hunt has served as an expert in numerous cases and offered opinions concerning human reaction time and the viability of warnings. Although Hunt had limited experience with stand-up rider forklifts prior to this case, his education, training, and experience in warnings on machinery and human factors are sufficiently relevant to make him qualified to give opinions in these areas here. What Hunt is unqualified to do is offer design defect opinions. The record does

[20] "Human factors analysis, otherwise known as ergonomics, is essentially the study of 'the interrelationship between human behavior or capabilities and the surrounding environment.'" Snoznik v. Jeld-Wen, Inc., Civil No. 1:09-cv-42, 2010 WL 1924483, at *19 (W.D.N.C. May 12, 2010) (quoting Douglas R. Richmond, Human Factors in Personal Injury Litigation, 46 ARK. L. REV. 333, 335 (1993)). Thus, "human factors experts study … factors such as: 'events that result from product warnings; … purposes for which hazardous warnings are needed; … potential human reactions caused by machinery control functions; and … expected behavioral responses caused by the existence or lack of devices.'" Id. (quoting same).

not indicate that he has training, education, or experience in designing forklifts or similar products. Thus, at trial, Hunt may not testify concerning any of his third opinion or those portions of his first and fifth opinions stating that, from a design defect standpoint, Crown forklifts should be manufactured with doors.[21]

Hunt's second opinion and part of his fifth opinion are not admissible because he has not shown that he used a reliable process in developing them. His second opinion asserts that forklift operators would intuitively perceive from a door that they should remain in the forklift during a tip-over or off-dock event. The fifth opinion, in part, concludes that, if Crown trained operators on how to judge whether exiting a forklift during an accident would be advisable, operators would likely apply that training to accidents involving sit-down forklifts, which would be dangerous. It does not appear that Hunt did any testing to determine whether operators would react in this manner to the presence of a door or the hypothetical training program. There is no evidence that he did something as simple as interviewing or surveying forklift operators on these points. Hunt's statements on operator response appear to be nothing more than an educated

[21] To be more specific, Hunt may only offer the following from his first opinion: "Warnings are almost always a less reliable means of controlling hazards than doing so through the use of physical guards." He is unqualified to render the following from his fifth opinion: "I would not recommend selling stand-up forklifts without doors. For all of the reasons discussed in this report, it would appear that operators will be safer with doors than without."

guess and, as such, may not be heard by a jury.[22] See Snoznik v. Jeld-Wen, Inc., Civil No. 1:09-cv-42, 2010 WL 1924483, at *19 (W.D.N.C. May 12, 2010) (excluding Hunt as a warnings expert because he did not test the instructions through the use of even "comprehension testing or surveys of potential users").

The Court is satisfied that the methodology behind the remaining three opinions meets the reliability standard set by Rule 702. Crown faults Hunt for relying on the work done by Plaintiffs' other experts without verifying their findings. Certainly an expert "may not simply repeat or adopt the findings of another expert without attempting to assess the validity of the opinions relied upon." In re Plypropylene Carpet Antitrust Litig., 93 F. Supp. 2d 1348, 1357 (N.D. Ga. 2000). Having reviewed Hunt's expert report and deposition transcript, however, the Court is satisfied that he reasonably relied on the work of Plaintiffs' experts Thomas Berry and Mark Tolliver,[23] that he compared their opinions to other sources including testing that conflicted with their conclusions, and that an expert in human factors and warnings would reasonably rely on the work done by

[22] To be clear, the Court excludes all of Hunt's fifth opinion beginning with the sentence that starts "Furthermore, this training might have negative effects for operators who also operate sit down forklifts…."

[23] Hunt also mentions the door designed by Mark Elrod as something he considered in developing his opinions. For the reasons stated above, Elrod's opinions are not admissible. Defense counsel could have, but did not, elicit from Hunt to what extent his conclusions rest on Elrod's work. Given that the foundation for Hunt's opinions is formed at least partially from admissible expert testimony, Crown will have to use cross-examination at trial if it wishes to attack that foundation. See Quiet Tech., 326 F.3d at 1345.

engineers and data analysis experts such as Berry and Tolliver. See Fed. R. Evid. 703; Covas v. Coleman Co., No. 00-8541-CIV, 2005 WL 6166740, at *6 (S.D. Fla. June 27, 2005); In re Plypropylene, 93 F. Supp. 2d at 1357, n. 6 (rejecting the argument that the expert in question "must conduct an independent review of [another expert's] statistical analysis, as opposed to the economic reasoning behind [the second expert's] model, before he can rely upon [the] analysis"). Furthermore, Crown will be able to cross examine Tolliver and Berry at trial and point out for the jury any weaknesses in their work. Id. at 1357 (noting that the parties opposing the expert "have had ample opportunity to scrutinize [the] analysis" the expert was relying upon). By taking the facts of this case, implementing Tolliver's and Berry's work, and then applying his own expert skill and knowledge, Hunt has engaged in a reliable methodology with regard to his fourth opinion and portions of his first and fifth opinions.

These opinions are also relevant and useful for the jury to consider. Crown contends that because Plaintiffs are not pursuing a traditional defective warnings claim, and Hunt has not developed or tested a warning that he offers as being better than the one currently on the forklift, allowing him to testify about the warning's inadequacies would confuse the jury and not be relevant. It must be stressed that Hunt opines that *no* warning would be capable of identifying hazards and giving forklift operators useful directions on how to avoid them.

(Deposition of Ruston Hunt, Doc. 45-7, p. 70). Thus, drafting a different warning would be pointless. His testimony as a human factors expert is relevant because it would buttress the opinions of Plaintiffs' design experts that operators should stay on forklifts during tip-over and off-dock accidents.

J. Crown's Daubert Motion on Mark Tolliver

Crown's Daubert motion on Mark Tolliver ("Tolliver") is granted in part and denied in part. Plaintiffs offer Tolliver as a data analysis expert who would testify about his analysis and categorization of Crown's accident reports. Tolliver placed the reports into categories related to the type of accident, the nature of the injury suffered by the forklift operator, the severity of the injury, how the injury occurred, and whether the operator stayed on the forklift, exited it, or attempted to exit. Additionally, Tolliver states that Crown's accident reports are internally inconsistent, unreliable, and incomplete. Crown seeks to exclude Tolliver as an expert, arguing that he is not qualified to render these opinions and that his work is not based on a reliable methodology.

While the Court recognizes that Tolliver does not possess ideal qualifications for the work he has done, it also doubts whether any such person could be found. Tolliver is a certified public accountant with a bachelor's degree in business administration. He has taught classes in audit techniques and statistical sampling. In his work as a public accountant, he regularly employs

accounting tools to analyze records, summarize, and then categorize them. Furthermore, Tolliver has provided expert opinions in several prior cases, including one involving a Crown forklift, where he used these techniques. The Court is unconvinced by Crown's argument that in order to be qualified to interpret the accident records Tolliver would need to possess knowledge, training, or education in the areas of engineering, accident reconstruction, and medicine. First, the individuals who summarized the accident reports for Crown do not possess these qualifications. Second, there is no evidence that the people who filled out the accident reports needed such training or knowledge in order to do so. Finally, and most importantly, Crown has offered no evidence that the reports are actually beyond the ability of an experienced accountant to decipher. This point could have been made rather easily by introducing various records and noting their complexity.[24]

The Court is also unconvinced by Crown's argument that Tolliver's methodology for summarizing and categorizing the reports is flawed. While his specific work with regard to Crown's reports might have only been done in the context of litigation, he professes to be employing the same tools of statistical analysis that he regularly uses in his work as an accountant. Crown has not

[24] The Court also notes that, to the extent that Tolliver did experience uncertainty in the earlier Crown case when he examined accident reports, he was able to refer to an experienced engineer to help resolve his questions. Thus, training and experience have qualified Tolliver to interpret the accident data for this case.

pointed to, and the Court doubts if there is, any legal precedent requiring an expert such as Tolliver to show that his general methodology has already been utilized with regard to the specific subject matter in issue outside of litigation. The Court is satisfied that the process Tolliver followed in his work is reliable. Furthermore, making judgment calls based on the information contained in the reports, as Tolliver did, is not speculation. If Crown disagrees with how Tolliver categorized certain accidents, at trial its counsel may question him about his decision-making process.

The Court grants Crown's motion to the extent it seeks to prevent Tolliver from drawing, and then proffering, any sort of negative inference from his conclusions that Crown's reports are inconsistent, unreliable, and incomplete. After analyzing the records, Tolliver concluded that Crown was biased in its investigation and reporting of certain types of accidents as compared to other types of accidents. However, in his deposition, Tolliver could not provide a specific number or even a narrow range for the records that were subject to bias, admitted he had no error rate for his analysis, and said he was unaware of any other forklift manufacturer that collects its accident data. (Deposition of Mark Tolliver, Doc. 45-3, pp. 35–37, 71, 87). Thus, his statements about bias are based on nothing more than a hunch and may not be heard by the jury. Tolliver may only discuss the quality of the accident reports if challenged by defense

counsel on the reliability of his work. Allowing Tolliver to initiate a critique of the reports' accuracy might confuse the jury into thinking that Crown was negligent, consciously indifferent, or fraudulent in its accident reporting when there is no reliable evidence for this.

K. Crown's Daubert Motion on Sandra Atkinson

Crown's Daubert motion to exclude testimony from Sandra Atkinson ("Atkinson") relating to Mr. Hernandez's future medical expenses is denied.[25] Crown first argues that Atkinson is unqualified to offer an opinion about future medical costs because she is not a certified life care planner and typically uses someone else to estimate such costs. The record shows that Atkinson is qualified to testify about Mr. Hernandez's future medical costs. Having worked in the areas of vocational rehabilitation and disability case management for over forty years, Atkinson has extensive experience in assessing future life expenses for disabled individuals. See Davis v. United States, Civil Action No. 5:10-cv-384, 2011 WL 7053628, at *1–2 (S.D.W.Va. Sept. 16, 2011) (allowing an expert to testify as a life care planner despite lacking formal certification because she had thirty years of experience in that field). She has been trained in life care planning, although she has chosen not to be certified as a planner. The significance of the fact that she has recently been delegating the task of developing life care plans to

[25] Atkinson was originally hired for Mr. Hernandez's worker's compensation matter, in which he was represented by different legal counsel than in this case.

someone else can be explored by Crown's counsel through cross examination at trial.

The Court is also unconvinced by Crown's argument that Atkinson did not use a reliable methodology because she only created a "preliminary" and "informal" life care plan. Atkinson has clarified that she used these terms to indicate that her analysis "was not a global assessment of all future medical/vocational/rehabilitation costs, but represented only the most concrete and relevant items at the time of [her] analysis." (Affidavit of Sandra Atkinson, Doc. 77-1, ¶5). Had she completed a formal life care plan, she would have accounted for additional future expenses that, while contingent, would have been reasonably probable for Mr. Hernandez to have to pay. The evidence shows that for the figures Atkinson has provided, her process of generating them was reliable. If Crown harbors suspicions that, in its final, formal form, a life care plan for Mr. Hernandez would have been markedly different from Atkinson's conclusions, its counsel should rigorously question her about it at trial.

L. Crown's Daubert Motion on Francis Rushing

Finally, Crown moves to exclude the opinions of Francis Rushing ("Rushing"). Rushing is an economist who was hired to provide an opinion concerning Mr. Hernandez's future lost wages and to determine the present value of his future medical expenses. Crown's motion is denied as moot insofar

as the lost wages opinion is concerned because Plaintiffs have indicated they will not be asking Rushing to offer this opinion at trial.

The motion is also denied with regard to Rushing's calculations of Mr. Hernandez's future medical costs. Crown faults Rushing's method of analysis because he relied on Atkinson's preliminary life care plan, which he received from Plaintiffs' attorney, without independently verifying her figures. The Court does not agree that this failure renders his methodology unreliable. In calculating the present value of money to assist juries to determine damages, forensic economists regularly rely on information provided to them by attorneys without investigating to confirm that the information is factually accurate. See e.g., Eastep v. Newman, Civil Action No. 1:12-cv-102 (WLS), 2013 WL 6835197, at *1–3 (M.D. Ga. Dec. 20, 2013); Ortiz v. Wiwi, Civil Action No. 3:11-cv-33 (CAR), 2012 WL 4482367, at *4–5 (M.D. Ga. Sept. 26, 2012). Courts have recognized that, although the opposing party may use cross examination to challenge the factual basis for the economist's assumptions, the process of placing a present value on future expenses is nonetheless reliable and useful for the jury. See Eastep, 2013 WL 6835197, at *2; Ortiz, 2012 WL 4482367, at *5. Such reasoning applies in this case as well.

III. Crown's Motion for Summary Judgment

Taking into consideration the preceding analysis on the parties' Daubert motions, the Court now turns to Crown's motion for summary judgment. Summary judgment is appropriate when "the pleadings, the discovery and disclosure materials on file, and any affidavits show there is no genuine issue as to any material fact and … the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. P. 56(c); see Celotex Corp. v. Catrett, 477 U.S. 317, 322, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). A genuine issue of material fact arises only when "the evidence is such that a reasonable jury could return a verdict for the nonmoving party." Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). When considering a motion for summary judgment, the court must evaluate all of the evidence, together with any logical inferences, in the light most favorable to the nonmoving party. Id. at 254–55. The court may not, however, make credibility determinations or weigh the evidence. Id. at 255; see also Reeves v. Sanderson Plumbing Prods., Inc., 530 U.S. 133, 150, 120 S.Ct. 2097, 147 L.Ed.2d 105 (2000).

A. Design Defect Claim

Summary judgment is denied with regard to Plaintiffs' design defect claim. Georgia law requires a plaintiff seeking damages under a design defect claim to show "that the product is defective and that the defect was the proximate cause

of the alleged injury." Folsom v. Kawasaki Motors Corp. U.S.A., 509 F. Supp. 2d 1364, 1374 (M.D. Ga. 2007). For both strict product liability and negligent design defect claims, a risk-utility test is applied "whereby the risks inherent in a product design are weighed against the utility or benefit derived from the product." Banks v. ICI Americas, Inc., 264 Ga. 732, 734, 735 (1994) (explicitly adopting this test); see also Ogletree v. Navistar Intern. Transp. Corp., 271 Ga. 644, 646 (1999) (recognizing that the risk-utility test incorporates "general negligence principles," including "reasonableness"). "[T]he reasonableness of choosing from among various alternative product designs and adopting the safest one if it is feasible is considered the 'heart' of product design defect cases…." Banks, 264 Ga. at 736 (internal citations omitted). The Supreme Court of Georgia has provided an extensive, non-exhaustive list of factors for the trier of fact to consider when weighing the reasonableness of a product manufacturer's design choice. Id. at 736, n. 6. Among these factors are whether, when the product was manufactured, a safer, alternative design existed[26]; "the usefulness of the product; the gravity and severity of the danger posed by the design; the likelihood of that danger; the avoidability of the danger … ; the user's ability to avoid danger; … the ability to eliminate danger without impairing the usefulness of the

[26] "Alternative safe design factors include: the feasibility of an alternative design; the availability of an effective substitute for the product which meets the same need but is safer; the financial cost of the improved design; and the adverse effects from the alternative." Banks, 264 Ga. at 736, n. 6.

product or making it too expensive; and … a manufacturer's proof of compliance with industry-wide practices, state of the art, or federal regulations…." Id. A "product's risks and benefits will rarely be determined as a matter of law when any of the Banks factors is disputed." Dean v. Toyota Indus. Equip. Mfg., Inc., 246 Ga. App. 255, 259 (2000).

A number of factual disputes preclude summary judgment on the design defect claim. Specifically, Plaintiffs have provided evidence that a safer, alternative design existed when Crown manufactured the forklift at issue here; that Crown's design posed a grave risk of lower left leg injury for operators; and that this danger could have been avoided or at least greatly minimized without impairing the usefulness of the forklift or making it significantly more expensive to purchase. "In general … the weighing of the risk-utility factors is to be done *by the trier of fact*," Dean, 246 Ga. App. at 259 (emphasis in original), and it certainly must be done so here.

B. Loss of Consortium Claim

Because summary judgment has been denied on the design defect claim, summary judgment is also denied on the loss of consortium claim brought by Mr. Hernandez's wife. See Behforouz v. Vakil, 281 Ga. App. 603, 604 (2006).

C. Punitive Damages Claim

Although Plaintiffs have shown that there is a genuine question of fact with regard to their design defect claim and, by extension, the loss of consortium claim, they have not done so for their punitive damages claim. In Georgia, there may be an award for punitive damages in a tort action only if "it is proven by clear and convincing evidence that the defendant's actions showed willful misconduct, malice, fraud, wantonness, oppression, or that entire want of care which would raise the presumption of conscious indifference to consequences." O.C.G.A. § 51-12-5.1(b). To receive punitive damages a plaintiff must show more than gross negligence because punitive damages are designed to punish wrongdoing by the defendant, not compensate the plaintiff for his injuries. Mastec N. Amer., Inc. v. Wilson, 325 Ga. App. 863, 866 (2014); O.C.G.A. § 51-12-5.1(c).

Thus, the Supreme Court of Georgia has held that, as a general rule, punitive damages are "improper where a defendant has adhered" to the relevant safety regulations and industry standards. Stone Man, Inc. v. Green, 263 Ga. 470, 471–72 (1993); see also Bryant v. BGHA, Inc., 9 F. Supp. 3d 1374, 1396 (M.D. Ga. 2014). Narrow exceptions to this rule have been found. For instance, a punitive damages award against General Motors was upheld despite its compliance with safety standards because there was evidence that it had rejected safer designs for the fuel tanks on its full-sized pickup trucks "because of

economic considerations." General Motors Corp. v. Moseley, 213 Ga. App. 875, 884–85 (1994), *abrogated on other grounds by* Webster v. Boyett, 269 Ga. 191, 196 (1998). Likewise, a tire manufacturer's motion for summary judgment on a punitive damages claim was denied because, even though it complied with the relevant federal safety standards, there was evidence it knew of separation defects with its tires' treads, had "refused to implement simple, relatively inexpensive solutions" because of profit margin concerns, and other tire manufacturers had adopted the safer designs. Mascarenas v. Cooper Tire & Rubber Co., 643 F. Supp. 2d 1363, 1374 (S.D. Ga. 2009). The Georgia Court of Appeals has also indicated, in dicta, that "evidence that the manufacturer engaged in a deliberate course of conduct which knowingly endangered those using the product" would be sufficient to overcome the rule. Uniroyal Goodrich Tire Co. v. Ford, 218 Ga. App. 248, 254–55 (1995), *rev'd in part on other grounds by* Ford v. Uniroyal Goodrich Tire Co., 267 Ga. 226 (1996).

There is no evidence that would justify an award of punitive damages in this case. Crown's stand-up rider forklift complied with the industry standards set by ANSI and the relevant regulations promulgated by OSHA.[27] Plaintiffs hang

[27] The Court rejects Plaintiffs' contention that, because their experts' application of the safety design hierarchy indicates the forklift's design is less safe than the alternatives the experts propose, the forklift failed to meet industry standards. The record shows that this safety hierarchy is a methodology for uncovering and addressing risks in a product's design. It is not the sort of concrete, formal, written regulations or standards that Stone Man and related cases were addressing. See Welch v. General Motors

their hat on the fact that, prior to Mr. Hernandez's injury, Crown was aware of 741 left leg and foot injuries to operators from collision accidents when the stand-up rider forklifts were in a forks-trailing position,[28] but that peg is too wobbly to support punitive damages. Plaintiffs' argument fails because, first, too little is known about these accidents to say how many of them would have put Crown on notice it needed to make design changes like the ones suggested by Plaintiffs' experts. The record does not indicate whether the earlier accidents could have been prevented by such design alterations.

Second, even assuming that most or even all of the 741 accidents were sufficiently similar to the one here to impute constructive notice to Crown, forklift manufacturers clearly have to weigh the benefits of a particular design against the possibility that other risks might be increased. This is the crucial distinction between Crown's actions and the manufacturer' decisions in the Mascarenas and Moseley cases. The defendants in those cases apparently did not weigh safety issues when rejecting design alternatives. Plaintiff's own expert found that, from 1977–2012, there were 782 tip-over and off-dock accidents involving stand-up rider forklifts manufactured by Crown and that these accidents resulted in at least nineteen deaths whereas there was only one death from a left leg or foot injury.

Corp., 949 F. Supp. 843, 844–45 (N.D. Ga. 1996) (Federal Motor Vehicle Safety Standards); Moseley, 213 Ga. App. at 884–85 (same); Stone Man, 263 Ga. at 472 ("county, state, and federal regulations").

[28] This number is provided by Mark Tolliver, Plaintiff's data analysis expert, who analyzed Crown's records of accidents that occurred in the period of 1977–2012.

Crown's knowledge of the risk of lower left leg injury must be seen in light of its consideration of other dangers.

Third, Crown was not consciously indifferent to the possibility that someone could suffer an injury to his left lower leg or foot from operating one of the stand-up rider forklifts it manufactured. It placed warnings on the forklifts and in the operator's manual relating to this danger. In an attempt to induce operators to keep their legs within the operator's compartments, Crown began manufacturing its stand-up forklifts with an entry bar that is situated on the edge of the compartment and will bring the forklift to a stop if stepped on. Moreover, studies by Crown's own engineers and outside consultants it retained concluded that doors would be at best exchanging one hazard for another, that an interlocking door would create additional pinch and crush points, that a latching door would increase the egress time for operators in an emergency, and that tip-over and off-dock accidents could cause serious injury or death. None of the studies found that adding doors would improve the overall safety of the forklifts. (See CSF, ¶¶28, 30-35, 40–52). Furthermore, unlike the defendants in Mascarenas and Moseley, there is no evidence that Crown's design choice was based on profit considerations.

In sum, Plaintiffs have not provided evidence that Crown is guilty of wrongdoing that deserves punishment. Finding engineers who disagree with

Crown's choice in trading one danger for another is not enough. The Crown stand-up rider forklift driven by Mr. Hernandez complied with all relevant safety regulations and written industry standards, and there is no American manufacturer that provides operator compartment doors as a standard feature on its stand-up rider forklifts. See Martin v. Crown Equip. Co., No. 05-3407-CV-S-GAF, 2008 WL 9858430, at *3, 7–8 (W.D. Mo. Jan. 23, 2008) (citing these facts in applying a "conscious disregard" or "complete indifference" standard under Missouri law and granting summary judgment on a punitive damages claim against Crown). Crown's motion for summary judgment is granted on the punitive damages claim.

IV. Conclusion

In light of the foregoing, the Court sets this case for trial and orders the following:

1. Plaintiffs' Motion to Exclude Expert Testimony of Ronald Grisez (Doc. 39) is denied.
2. Plaintiffs' Motion to Exclude Expert Testimony of Laurentius Marais (Doc. 40) is granted in part and denied in part.
3. Plaintiffs' Motion to Exclude Expert Testimony of Charles Watkins (Doc. 41) is denied.

4. Plaintiffs' Motion to Exclude Expert Testimony of Thomas McNish (Doc. 42) is denied.
5. Plaintiffs' Motion to Exclude Expert Testimony of Dan Dunlap (Doc. 43) is granted in part and denied in part.
6. Crown's Motion to Exclude Expert Testimony of Ruston Hunt (Doc. 50) is granted in part and denied in part.
7. Crown's Motion to Exclude Expert Testimony of Mark Tolliver (Doc. 46) is granted in part and denied in part.
8. Crown's Motion to Exclude Expert Testimony of Russ Rasnic (Doc. 47) is granted in part and denied in part.
9. Crown's Motion to Exclude Expert Testimony of Thomas Berry and Mark Elrod (Doc. 48) is granted in part and denied in part.
10. Crown's Motion to Exclude Expert Testimony of Plaintiffs' Damages Experts (Doc. 49) is denied.
11. Crown's Motion for Summary Judgment (Doc. 58) is granted in part and denied in part. Summary judgment is granted on Plaintiffs' punitive damages claim but denied insofar as the design defect and loss of consortium claims are concerned.

SO ORDERED, this the 11th day of March, 2015.

s/ Hugh Lawson
HUGH LAWSON, SENIOR JUDGE

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